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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,966	03/02/2004	Santosh P. Gaur	RPS920020014US1	2143
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Driggs, Hogg, Daugherty & Del Zoppo Co., L.P.A. 38500 CHARDON ROAD DEPT. IRA WILLOUGBY HILLS, OH 44094			EXAMINER KANE, CORDELIA P	
			ART UNIT 2132	PAPER NUMBER
			NOTIFICATION DATE 09/25/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/790,966	Applicant(s) GAUR ET AL.	
	Examiner CORDELIA KANE	Art Unit 2132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 – 26 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 2, 4 – 7, 9, 12 – 16, 20 – 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noehring, and further in view of Ganesan et al's US Publication 2003/0069973 A1.

4. Referring to claim 1, Noehring teaches:

- a. A memory controller configured to transfer data received from the network to the memory (page 2, paragraph 37).
- b. A network interface coupled to the memory controller comprising:
 - i. A first data moving unit configured to exchange secure data with a first portion of the network and a second DMU configured to exchange non-secure data with a portion of the network (page 3, paragraph 43, Figure 5). Since the inbound and outbound packets are IP packets, and clear text packets respectively and they may be split into a dedicated mode with dedicated channels for each one.
- c. Logic configured to identify an information flow associated with the portion of data, to identify a priority of that portion of data (page 5, paragraph 58).

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- d. Logic configured to retrieve a portion of the data from the memory using the memory controller (page 2, paragraph 37).
 - e. Logic configured to perform security operations on the retrieved portion of the data (page 2, paragraphs 37-38).
 - f. Logic configured queue data for transferring based on the priority information (page 5, paragraph 58).
 - g. Logic configured to store the operated on portion of the data in memory using the memory controller wherein the memory controlled is further configured to transfer the operated on portion of the data from memory to the network (page 2-3, paragraph 38).
5. Noehring does not explicitly disclose the priority of the information flow being independent of an order in which the data was stored in memory or any contentions of memory, and discarding portions of data associated with a particular flow and priority. However, Ganesan discloses receiving a packet and determining which class it belongs to, and possibly dropping the packet based on the class it belongs to (page 11, paragraph 128). At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Noehring and Ganesan before him or her, to modify the memory access of Noehring to include the classification and prioritization of Ganesan. The motivation for doing so is to provide bandwidth allocation on a per-system rather than per-interface basis (page 10, paragraph 127).
6. Referring to claim 2, Noehring teaches that the first and second DMU directly communicate with the first and second portions of the network (Figure 5, 528 and 562).

7. Referring to claim 4, Noehring teaches:
 - h. Logic configured to obscure the portion of the data when the retrieved portion is non-secure data (Figure 5, 518).
 - i. Logic configured to decipher the portion of the data when the retrieved portion is secure data (Figure 5, 546).
 - j. Logic configured to determine an integrity of the portion of data (pages 2-3, paragraph 38).
8. Referring to claim 5, Noehring teaches performing quality of service operations on the data in coordination with the performing of security operations (pages 2-3, paragraph 38).
9. Referring to claim 6, Noehring teaches logic configured to identify an information flow associated with the portion of data, to determine the priority of that portion of data, and to schedule transferring the operated on portion of the data from memory based on the priority information (page 5, paragraph 58).
10. Referring to claim 7, Noehring teaches:
 - k. Logic configured to decipher the portion of the data prior to identifying the information flow when the retrieved portion is secure data (figure 5, 546, 550, page 3, paragraph 38).
 - l. Logic configured to obscure the portion of the data after identifying the information flow when the retrieved portion is non-secure data (Figure 5, 518, 520).

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11. Referring to claims 9 and 21, Noehring teaches referencing the memory banks in a sequence that minimizes memory access time (page 3, paragraph 42).
12. Referring to claims 12 and 22, Noehring teaches:
 - m. Transferring data received from the network to the memory (page 2, paragraph 37).
 - n. Identifying an information flow associated with the portion of data, and to identify a priority of that portion of data (page 5, paragraph 58).
 - o. Retrieving a portion of the data from the memory using the memory controller (page 2, paragraph 37) wherein the portions of the data having higher priority information flow are retrieved before portions having lower priority (page 5, paragraph 58).
 - p. Performing security operations on the retrieved portion of the data (page 2, paragraphs 37-38).
 - q. Queuing data for transfer based on the priority information (page 5, paragraph 58).
 - r. Storing the operated on portion of the data in memory using the memory controller wherein the memory controlled is further configured to transfer the operated on portion of the data from memory to the network (page 2-3, paragraph 38).
13. Noehring does not explicitly disclose the priority of the information flow being independent of an order in which the data was stored in memory or any contentions of memory, and discarding portions of data associated with a particular flow and priority.

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However, Ganesan discloses receiving a packet and determining which class it belongs to, and possibly dropping the packet based on the class it belongs to (page 11, paragraph 128). At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Noehring and Ganesan before him or her, to modify the memory access of Noehring to include the classification and prioritization of Ganesan. The motivation for doing so is to provide bandwidth allocation on a per-system rather than per-interface basis (page 10, paragraph 127).

14. Referring to claims 13 and 23, Noehring teaches:

s. Obscuring the portion of the data when the retrieved portion is non-secure data (Figure 5, 518).

t. Deciphering the portion of the data when the retrieved portion is secure data (Figure 5, 546).

u. Determining an integrity of the portion of data (pages 2-3, paragraph 38).

15. Referring to claims 14 and 24, Noehring teaches performing quality of service operations on the data in coordination with the performing of security operations (pages 2-3, paragraph 38).

16. Referring to claims 15, and 25, Noehring teaches logic configured to identify an information flow associated with the portion of data, to determine the priority of that portion of data, and to schedule transferring the operated on portion of the data from memory based on the priority information (page 5, paragraph 58).

17. Referring to claim 16, Noehring teaches:

- v. Logic configured to decipher the portion of the data prior to identifying the information flow when the retrieved portion is secure data (figure 5, 546, 550, page 3, paragraph 38).
 - w. Logic configured to obscure the portion of the data after identifying the information flow when the retrieved portion is non-secure data (Figure 5, 518, 520).
18. Referring to claim 20, Noehring teaches including error correcting code with the data transferred to or stored in the memory and detecting errors in the data retrieved or transferred from the memory based on the error correcting code included with the data (page 7, paragraph 79).
19. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noehring in view of Ganesan as applied above, and further in view of Kocaman. Noehring in view of Ganesan discloses all the limitations of the parent claim. Noehring in view of Ganesan does not explicitly disclose having a SERDES circuit coupled between the DMU and the network. However, Kocaman discloses that it is known that network components include a serializer-deserializer to convert the serial stream of data into parallel and parallel into serial (page 1, paragraph 5). Noehring in view of Ganesan and Kocaman are analogous art because they are from the same field of endeavor, network processing. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Noehring in view of Ganesan and Kocaman before him or her, to modify the system of Noehring in view of Ganesan to include the

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serializer-deserializer of Kocaman. The motivation for doing so would have been that it is well known in the art (page 1, paragraph 5).

20. Claims 8, 17 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noehring in view of Ganesan as applied above, and further in view of Nozawa. Noehring in view of Ganesan discloses all the limitations of the parent claims. Noehring in view of Ganesan does not explicitly disclose compressing and decompressing data before and after encryption. However, Nozawa discloses:

- x. Compressing the data prior to encrypting the data (column 3, lines 29-32).
- y. Decompressing the data after decrypting the data (claims 11 and 12).

21. Noehring in view of Ganesan and Nozawa are analogous art because they are from the same field of endeavor, encrypted data storage and retrieval. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Noehring in view of Ganesan and Nozawa before him or her, to modify the process of Noehring in view of Ganesan to include the compression of Nozawa. The motivation for doing so would have been to not lose the redundancy of data in a large quantity of data (column 3, lines 26-38).

22. Claims 10, 11, 18 and 19 are rejected under 35 USC 103 (a) as being obvious over Noehring in view of Ganesan and further in view of Trost. Referring to claims 10 and 18, Noehring in view of Ganesan discloses all the limitations of the parent claim. Noehring in view of Ganesan does not appear to explicitly disclose grouping the

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memory requests together. However, Trost discloses grouping the memory requests together and not starting the second group before the first group is completed (column 2, lines 5-8). Noehring in view of Ganesan and Trost are analogous art because they are from the same field of endeavor of memory access. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Noehring in view of Ganesan and Trost before him or her, to modify Noehring in view of Ganesan to include grouping read and write requests, then completing one group before the other of Trost. The motivation for doing so would have been to eliminate the time gap between the groups of requests (column 1, lines 42-45).

23. Referring to claim 11, Noehring teaches including error correcting code with the data transferred to or stored in the memory and detecting errors in the data retrieved or transferred from the memory based on the error correcting code included with the data (page 7, paragraph 79).

24. Referring to claim 19, Noehring teaches receiving (reading) data packets from memory in predetermined byte sizes (page 3, paragraph 42).

Conclusion

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CORDELIA KANE whose telephone number is (571)272-7771. The examiner can normally be reached on Monday - Thursday 8:00 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

/C. K./
Examiner, Art Unit 2132

/Gilberto Barron Jr/
Supervisory Patent Examiner, Art Unit 2132